**Before the**
**FEDERAL COMMUNICATIONS COMMISSION**
**Washington, D.C. 20554**

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| In the Matter of | ) | |
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| Delete, Delete, Delete | ) | GN Docket No. 25-133 |

**COMMENTS OF MAXAR TECHNOLOGIES INC.**

## I. INTRODUCTION AND SUMMARY

Maxar welcomes the Commission's initiative to take a comprehensive, fresh look at its rules.[1] Powered by its cutting-edge WorldView-Legion constellation, Maxar provides 90% of the foundational geospatial intelligence used by the U.S. government for national security and keeping troops safe on the ground. With U.S. national defense at stake, every minute counts. Nonetheless, despite serving this critical national defense function and having co-primary status with Federal operations in the X-band (8025-8400 MHz), Maxar is required to have its downlinks across the globe be secondary to foreign government missions as well as U.S. government missions that do not impact national security. This is due to a license condition that implements Footnote US258, an outdated rule developed for an era when Earth observation satellites were operated almost exclusively by the government—and actually relied on film.

Maxar is a proud government partner, and delivery of its geospatial imagery in support of national security is too important to be jeopardized by red tape. Accordingly, Maxar requests that the Commission remove the "case-by-case electromagnetic compatibility analysis" requirement from Footnote US258. In its place, the Commission should modernize the rule with a tiered system

[1] Maxar Technologies Inc. ("Maxar") submits the following comments on the above-referenced Federal Communications Commission ("FCC" or "Commission") Public Notice (the "Public Notice"). *See In re Delete, Delete, Delete*, Public Notice, GN Docket No. 25-133, DA 25-219 (rel. Mar. 12, 2025) ("*Delete PN*").

that accounts for U.S. national security agencies' significant reliance on commercial remote sensing innovation and provides true co-primary status to Federal and non-Federal Earth imaging missions that support U.S. national defense. Simply put, timely downlink of geospatial information that supports U.S. national security – whether originating from non-Federal or Federal satellites – should always take precedence over transmitting remote sensing data from foreign satellites and non-critical U.S. missions. Maxar looks forward to working with the Commission and other government partners to boost national security and achieve this clear public interest benefit.

## II. BACKGROUND

Maxar, a U.S. company and a leading provider of geospatial insight, strongly supports the Commission's deregulatory initiative to "facilitate and encourage American firms' investment in modernizing their networks, developing infrastructure, and offering innovative and advanced capabilities."[2]

Maxar utilizes X-band spectrum allocated for the Earth Exploration Satellite Service ("EESS") for wideband downlink of its geospatial imagery. To help reduce latency, Maxar utilizes a global network of ground stations, including several across the United States. Powered by WorldView-Legion, the most advanced commercial Earth observation constellation in orbit, Maxar supports government customers, enterprise customers, and consumers across a variety of sectors. Critically, Maxar provides 90% of the foundational geospatial intelligence used by the U.S. government for national security and keeping troops safe on the ground. With U.S. national defense at stake, time is of the essence to downlink and deliver imagery taken from space.

The U.S. Table of Frequency Allocations ("TOFA") allocates the X-band on a co-primary

[2] *Delete PN* at 1.

basis for Federal and non-Federal EESS users.[3] Specifically, Footnote US258 states that: "In the bands 8025-8400 MHz and 25.5-27 GHz, the Earth exploration-satellite service (space-to-Earth) is allocated on a primary basis for non-Federal use. Authorizations are subject to a case-by-case electromagnetic compatibility analysis."[4]

However, unnecessary red tape has made that co-primary status illusory – and had the perverse and unintended effect of downgrading U.S. national security interests below foreign interests and less sensitive domestic operations. Specifically, in 2019, after Maxar operated its constellation for more than two decades without reported interference issues with Federal users, the Commission imposed a condition on Maxar as part of its modification grant to add the WorldView-Legion satellites:

> Transmissions of remote-sensing and telemetry data in the 8025-8400 MHz frequency band may only be made to earth station coordinated with the Air Force Spectrum Management Office (AFSMO), National Aeronautics and Space Administration (NASA), and National Oceanic and Atmospheric Administration (NOAA). [Maxar] shall provide the FCC the list of coordinated earth stations.[5]

Subsequently, the Commission attached the same condition, which appears to be tied to the "case-by-case" analysis required by US258, to license grants for other commercial EESS operators.[6]

As a result, Maxar and other non-Federal EESS operators must coordinate with various Federal agencies who also use the band, with NASA taking the lead by requiring commercial

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[3] 47 C.F.R. § 2.106 n.US258.

[4] *Id.*; *see also EarthWatch Incorporated Application for Authority to Launch and Operate a Remote Sensing Satellite System*, Order and Authorization, 10 FCC Rcd 20 (1995) ("*EarthWatch Order*").

[5] *DG Consents Sub, Inc.*, ICFS File No. SAT-MOD-20180918-00073, Stamp Grant, Condition 7 (June 13, 2019).

[6] *See, e.g.*, *Planet Labs PBC Application for Modification of License*, ICFS File Nos. SAT-LOA-20220920-00112, SAT-AMD-20231013-00251, Order, DA 24-446, Attachment, Condition 4 (rel. May 10, 2024).

operators to execute a one-sided coordination agreement. Importantly, this unilateral coordination agreement requires Maxar – and Maxar alone – to employ overly conservative assumptions to avoid any chance of conjunctions with all X-band EESS missions from agencies within the Space Frequency Coordination Group ("SFCG")—regardless of whether they impact national security. These are not only U.S. Federal agencies: SFCG missions include those operated by and in the interests of foreign government agencies, including Chinese missions. Thus, in practice, non-Federal EESS users operate at a disadvantage to Federal users and foreign missions, regardless of the relative sensitivity, importance, or national security implications of each mission. In short, compliance with the coordination agreement has the potential to negatively impact U.S. national security.

Operators should not have to bypass downlinking critical data to protect missions that do not have similar time sensitivity (soil monitoring, climate, etc.) or those that are not employed directly by the U.S. government, and this proceeding provides the ideal vehicle for the Commission to realign its rules and conditions. Accordingly, as a valued provider of critical geospatial imagery in support of U.S. national defense, Maxar suggests that the Commission remove the requirement for a "case-by-case electromagnetic compatibility analysis" from footnote US258. This targeted deletion would alleviate burdensome conditions on non-Federal EESS systems that effectively require them to protect not only non-urgent Federal missions in the band, but certain foreign government missions as well. In place of this footnote, and as described in more detail below, Maxar proposes that the FCC create a tiered system that prioritizes time-sensitive national security missions on a true co-primary basis, regardless of whether those missions are completed by Federal or non-Federal users. Doing so would better protect U.S. national security interests and serve the public interest.

## III. REMOVING THE "CASE-BY-CASE ELECTROMAGNETIC COMPATIBILITY ANALYSIS" REQUIREMENT IN FOOTNOTE US258 WILL PROTECT U.S. NATIONAL SECURITY INTERESTS AND FOSTER THE GROWTH OF COMMERCIAL REMOTE SENSING.

### A. Footnote US258 Is Unduly Burdensome for Non-Federal EESS Operators and Negatively Impacts National Security.

While Maxar does not object to sharing coordination obligations in shared frequency bands where there may be real risk of harmful interference, the Federal government's interpretation of the "electromagnetic compatibility analysis" component of US258 creates unilateral interference avoidance obligations and unduly burdensome conditions on EESS operators, including Maxar.

The Space Force has recognized that "[t]he utility of space-based sensors for tactical operations can be limited by delays between collection and downlink opportunities."[7] As previously noted, Maxar provides more than 90% of all foundational geospatial intelligence used by the U.S. intelligence community ("IC") and military. Despite the clear Federal national security interests in these operations, conditions on Maxar's FCC licenses, as well as those of other commercial remote sensing operators, require that Maxar enter into a coordination agreement with NASA for its X-band downlink operations. Compliance with this agreement forces Maxar to contemplate degradations in its service, despite the national security interests in having latency-, redundancy-, and time-sensitive information for the U.S. IC and military. Such compliance is required even though many of the missions Maxar is required to protect have no such sensitivities, and the majority of NASA's "protected missions" are, in fact, foreign SFCG missions. Moreover, the number of missions NASA has required Maxar to protect has increased precipitously in recent years, and shows no sign of slowing down.

[7] U.S. Space Force, *Space Domain Awareness*, Space Doctrine Publication 3-100, at 39 (Nov. 2023), available at https://www.starcom.spaceforce.mil/Portals/2/SDP%203-100%20Space%20Domain%20Awareness%20(November%202023)_pdf_safe.pdf.

Thus, operational impacts to Maxar and its U.S. government customers, including on its highest priority (90-minute timeline) contracts, likely will only worsen over time without Commission action.

### B. Creating a Tiered System That Prioritizes Mission-Critical National Security Needs Will Properly Balance Competing Federal Needs.

In lieu of the second sentence of US258, Maxar recommends adopting a tiered Federal/non-Federal co-primary approach for X-band downlink. Creating a tiered system that prioritizes mission-critical national security needs would remove the operational barriers non-Federal operators face when providing mission-critical services to Federal customers and would ensure that SFCG missions continue to receive priority over most non-Federal operations.

In the first tier ("Tier 1"), Federal and non-Federal missions fulfilling time-sensitive national security requirements would have the highest priority among X-band downlink transmissions. To qualify for Tier 1, non-Federal missions would need to be contracted to provide commercial remote sensing services to the Department of Defense ("DoD"), the National Geospatial-Intelligence Agency ("NGA"), or the National Reconnaissance Office ("NRO"). Other Federal missions, as well as missions of allied nations, would fall within Tier 2, and Tier 3 would include any non-Federal missions that do not qualify for Tier 1 status.

The tiered system accounts for the realities of commercial remote sensing data used to protect our national defense. Time is *always* of the essence for these missions, and operators are contractually obligated to downlink data within certain timeframes and at a certain rate. Prioritizing critical national security missions over non-urgent scientific missions represents a reasonable solution that recognizes operational realities and would create net benefits for EESS operators and the U.S. government customers they serve.

### C. Eliminating US258 and Adopting a Tiered Approach for X-Band EESS Coordination Will Create Policy Outcomes Consistent with the Intent of the Footnote.

Aside from protecting national security and promoting U.S. dominance in the global space economy, eliminating US258 and establishing a tiered system would pare down the coordination process back to first principles and acknowledge that the footnote itself is hopelessly outdated.

The record shows that footnote US258 predates many of the most seminal changes that have occurred in the remote sensing industry since the X-band was first allocated to EESS at the World Administrative Radio Conference in 1971.[8] In fact, footnote US258 dates back so far in the record that it was *already* a footnote in the U.S. Table by the time NRO retired the last of its film-return photo-reconnaissance satellites (*i.e.*, satellites that dropped capsules of film into the ocean) in 1984.[9]

More than a decade after footnote US258's adoption, the Commission issued an EESS space station license to Maxar's predecessor in interest, EarthWatch Incorporated, to launch and operate the first commercial remote sensing satellite system. Even then, interference with Federal operations was not a serious concern. In the Order, the International Bureau ("IB") explained that

[8] ITU, *Final Acts of the World Administrative Radio Conference for Space Telecommunications* 99 (1971), available at https://search.itu.int/history/HistoryDigitalCollectionDocLibrary/4.95.43.en.100.pdf.

[9] Gerald K. Haines, *Critical to US Security: The Development of the Gambit and Hexagon Satellite Reconnaissance Systems* 55-56 & n.56 (1997), available at https://www.nro.gov/Portals/65/documents/foia/declass/GAMHEX/GAMBIT%20and%20HEXAGON%20Histories/2.PDF (noting that by the time of its last flight in August 1984, "[t]he development of near-real time imagery systems made the GAMBIT-3 [satellite's] film return system obsolete"); *Implementation of the Final Acts of the World Administrative Radio Conference, Geneva, 1979*, Second Report and Order, 49 Fed. Reg. 2408 (rel. Jan. 19, 1984) (showing footnote US258 under X-band EESS in the Federal table).

the 8025-8400 MHz band was allocated on a co-primary basis to non-Federal operators[10] and that the Army, Navy, and Air Force did not believe that EarthWatch's operations would interfere with fixed or fixed-satellite service ("FSS") DoD facilities in the band.[11] Meanwhile, a study performed by NTIA concluded that there was no non-Federal use and only *slight* use of the EESS service by NASA and the Department of Commerce—three EESS facilities in total—in the band in June 1996.[12]

Since then, seismic shifts in the Earth observation sector further underscore the need to recalibrate the Federal/non-Federal X-band EESS allocation. Most notably, the U.S. government's remote sensing strategy has shifted towards the use of commercial remote sensing products,[13] which means that the critical national security operations that would have otherwise qualified for protection as Federal operations under US258 are now handled by commercial EESS operators

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[10] *EarthWatch Order* ¶ 7 & n.10 (noting that "primary" services have equal rights to operate in particular frequencies).

[11] *Id. See also* Philip E. Gawthorp, *Assessment of the Expansion of the Earth Exploration-Satellite Service in the 8025-8400 MHz Range*, NTIA TM 97-339, 27-29 (1997), available at https://its.ntia.gov/publications/download/NTIA-TM-97-339.pdf (showing a significant number of DoD fixed and FSS facilities in the 8025-8400 MHz band as of June 1996).

[12] *Id.* at 26 ("The three bands which compose the 8025-8400 MHz frequency range are used for Government fixed and fixed-satellite (Earth-to-space) service operations. . . . There is only *slight* use of the Earth exploration-satellite service by two agencies (NASA and Commerce) with no non-Government entities using any frequencies within this band.") (emphasis added).

[13] *See, e.g.*, Land Remote Sensing Policy Act of 1992, Pub. L. 102-55, codified as amended at 15 U.S.C. § 5601 (Oct. 28, 1992) (calling for the establishment of a new national land remote sensing policy and observing that "commercialization of land remote sensing should remain a long-term goal of United States policy"); *U.S. Commercial Remote Sensing Space Policy Fact Sheet* (2003), available at https://www.nesdis.noaa.gov/s3/2021-08/Commercial%20Remote%20Sensing%20Policy%202003.pdf (directing the U.S. government to "[r]ely to the maximum practical extent on U.S. commercial remote sensing space capabilities for filling imagery and geospatial needs for military, intelligence, foreign policy, homeland security, and civil users"); White House, *National Space Policy of the United States of America* (Dec. 9, 2020), available at https://trumpwhitehouse.archives.gov/wp-content/uploads/2020/12/National-Space-Policy.pdf (instructing the U.S. government to "[p]rioritize partnerships with commercial industry to meet Government requirements through the modification of existing commercial space capabilities and services").

with an unintended quasi-secondary status in the band. This shift also coincided with the ITU's addition of a primary international EESS allocation in the 8025-8400 MHz band in 1996[14] and the deployment of more than 1,200 active remote sensing satellites worldwide since.[15] In spite of these developments, and despite the fact that 50% of all global remote sensing satellites are now commercial in nature,[16] the Commission has not examined whether footnote US258 aligns with U.S. national security and space priorities.

Maxar asserts that US258, in its current form, undermines these priorities and should be eliminated. In X-band as in Ka and Ku, "the time is ripe to revisit the [Federal and non-Federal] sharing regime . . . developed [nearly] a [half] century ago."[17] In its stead, the tiered system, as proposed by Maxar, will better serve the public interest and rightfully prioritize non-Federal and Federal X-band downlinks that provide mission-critical national security geospatial intelligence.

[14] ITU Res. 124 (WRC-97), *Protection of the fixed service in the frequency band 8 025-8 400 MHz sharing with geostationary-satellite systems of the Earth exploration-satellite service (space-to-Earth)* (1997) (noting that "prior to this Conference, the band 8 025-8 400 MHz was allocated to the earth exploration-satellite service (space-to-Earth) on a secondary basis in Regions 1 and 3, except for those countries listed in No. S5.464 of the Radio Regulations").

[15] Union of Concerned Scientists, *UCS Satellite Database*, https://www.ucs.org/resources/satellite-database (last modified May 1, 2023).

[16] *Bridging Space and Earth: The Role of 7/8 GHz in Delivering Space-Based Insights* 6 (July 2024), available at https://payloadspace.com/wp-content/uploads/2024/10/EESS-Xband-White-Paper-V2.4.pdf.

[17] *Modernizing Spectrum Sharing for Satellite Broadband*, Draft Notice of Proposed Rulemaking, SB Docket No. 25-157, RM-11990, FCC-CIRC2504-01 ¶ 10 (Apr. 7, 2025).

## IV. CONCLUSION

Maxar appreciates the Commission's efforts to streamline existing regulations and alleviate unnecessary regulatory burdens for regulated entities. Removal of the "electromagnetic compatibility analysis" requirement in US258 will allow valued government partners like Maxar to best aid in U.S. national defense.

Respectfully submitted,

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